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Moving Forward with Wellness Incentives Under the Affordable Care Act: Lessons from Germany

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ABSTRACT: Health care payers in the United States and abroad have used wellness incentives as a tool to improve health and reduce costs. In Germany, public insurers operate many such programs. Participation nearly doubled between 2004 and 2008, reaching one-quarter of the publicly insured population. An evaluation of one large wellness program there found that it reduced costs. However, population-level survey data also suggest that individuals with low incomes or poor health are less likely to enroll. In the United States, the Affordable Care Act raised the maximum allowed size of wellness incentives, which could lead to wide differences in insurance premiums between users and nonusers of programs, and may risk reintroducing a form of medical underwriting. The German experience confirms the cost-saving potential of programs, but also suggests that they should be evaluated rigorously to ensure they do not disadvantage those with health problems or low incomes.

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BACKGROUND

In the United States, Germany, and many other Western countries, rates of chronic diseases and obesity are on the rise among adults and children. While many factors contribute to this trend, social determinants play an important role, which means that people with low incomes typically have worse health than those with higher incomes.[1] For this reason, public health interventions focused on vulnerable groups are urgently needed. In addition to such efforts, many nations have begun to explore the potential of health promotion efforts focused on individuals. Health or "wellness" incentives, which reward individuals for participating in wellness programs or for meeting health targets, have the potential to improve health and achieve savings.[2] In the United States, such wellness programs have been gaining momentum, with more than half of all large employers offering them to their employees.[3] Provisions in the Affordable Care Act expand the permitted scope of wellness incentives.[4]

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In Germany, the German Social Security Code allows public insurers, known as sickness funds, to offer their members bonuses to participate in health promotion, screening, and checkup programs. Participation is voluntary and all major sickness funds offer a wide range of programs and actively promote them to their members. These wellness programs typically require participants to register and have health care professionals or others document the performance of certain actions or the achievement of goals, such as receiving an influenza vaccination, meeting Body Mass Index targets, or exercising in a gym for a certain number of times per week. Incentives may be offered in cash, as reductions of insurance contributions, or as rewards such as sports equipment.

These bonuses must be funded through gainsharing resulting from savings attributable to the reduced health care costs of those who participate in wellness programs, rather than through general insurance contributions. This means that the incentives must not be funded through direct cost-shifting from healthy to unhealthy insures—for example, by increasing contributions for all those who do not enroll in the programs or who enroll but fail to meet the required standards. Sickness funds must report regularly (at least every three years) to the relevant authority on the savings from the wellness programs. Bonuses may be paid only if there are savings attributable to the wellness programs.

In this brief, we present data resulting from a previously published evaluation of wellness programs run by one of Germany's largest sickness funds, the Barmer Ersatzkasse, which insures about 9 percent of the population.[5] Next, we draw on a new analysis of survey data to explore participation of different patient groups in Germany's wellness programs. Finally, we discuss the expansion of wellness incentives under the Affordable

Germany's Sickness Funds and "Co-Responsibility" for Health

Similar to many other European countries, Germany has a statutory health insurance system providing universal coverage.[6] Around 90 percent of the population is covered by public insurance, with the remainder purchasing private coverage. Public health insurance is provided by competing "sickness funds," with Germans choosing from among 150 different funds. Individuals' contributions to their sickness fund may not exceed 15.5 percent of their gross earnings. Prior to 2010, contributions were split equally between employers and employees, but reforms in 2010 froze employers' contributions at 7.3 percent and mandated that all future increases be met by employees. Contributions are made from pretax earnings and capped at an annual gross salary of $64,000. Contributions for unemployed individuals are made by the government. Copayments may be required for prescription medicines, physician visits, and hospitalizations, although there are limits on the maximum contribution.

The core principles governing the sickness funds, specified in the Social Security Code, identify the funds' responsibility to provide health care services to their enrollees and citizens' "co-responsibility" for their own health. Accordingly, citizens are expected to "lead a health-conscious lifestyle, take part in preventative measures [and] play an active role in treatment and rehabilitation [in order to] avoid sickness and disability, and to overcome the respective consequences." Subsequent articles set out a range of provisions through which sickness funds may implement this approach, including financial incentives to individuals who display what is judged to be appropriate health-conscious behavior. Such incentives can potentially benefit sickness funds if they improve the health of their enrollees, since reducing or controlling costs gives funds a competitive advantage. Additionally, like loyalty schemes such as frequent-flyer programs or store reward cards, wellness programs can help sickness funds to interest and retain particularly desirable members. Since members' contributions are income-tested, offering rewards that appeal to people with high incomes and low morbidity can enable sickness funds to attract the most profitable enrollees.[7]

Care Act and draw lessons from the German experience about the potential benefits and pitfalls of these programs.

EVALUATION OF A GERMAN WELLNESS PROGRAM

The Barmer Ersatzkasse (BEK) wellness program was one of the first to be offered in Germany, with more than 25 reward-eligible prevention activities including immunizations, chronic condition checkups, cancer screenings, and exercise programs. Members who voluntarily elect to participate in the program are issued a "Bonus Card" that tracks the points they earn per intervention. They can redeem the points for in-kind bonuses such as one-year access to a Web-based electronic health record, sports bags, bicycle helmets, a Nintendo Wii Fit console, or partial funding of a short wellness vacation. Alternatively, they can choose an annual cash benefit up to €30 (US$42).

In a cohort study, differences in health care costs between participants in the wellness program and nonparticipants were calculated between January 1, 2004, and December 31, 2006 (nonparticipants were matched with participants according to sex, age, postal code, insurance status, and health care costs in order to act as controls). Costs were categorized as hospital spending, medication spending, and additional benefits. Ambulatory physician spending could not be included in the analysis, though the additional benefits category includes physical and occupational therapy. To examine whether there were differences across groups with different health care usage (as a proxy for health status), a subgroup analysis was performed comparing the costs of participants and nonparticipants with no health care utilization in the year prior to the beginning of the study (see Methodology for further details.)

By 2006, the study found that participants in the wellness programs had significantly lower costs than nonparticipants (Exhibit 1 and Exhibit 2). The mean difference for the sum of all three cost categories between the two groups amounted to €177 (US$251) savings per person enrolled in the wellness program per year. If program costs were taken into account, overall savings were reduced to €101 (US$143). However, program participation did not result in lower health care costs for all enrollees. The subgroup analysis of those participants and nonparticipants who had no health care costs in 2003 found differences in all three areas of spending, with those participating in the wellness program having significantly higher costs overall (Exhibit 3). Despite the higher costs compared with the nonparticipants in this subgroup, these participants' costs were lower than the mean costs across the overall intervention and control groups.

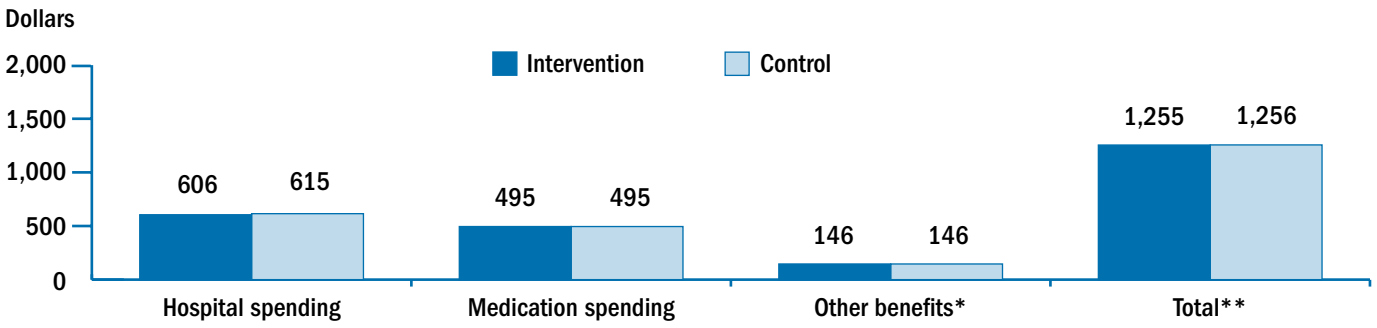
WHO USES WELLNESS PROGRAMS?

In a separate study, we analyzed data from the Bertelsmann Foundation's Health Care Monitor, a survey of around 1,500 respondents from a nationally representative panel, to better understand who uses wellness programs in Germany. For each year between 2004 and 2008, we conducted multivariate logistic regression analyses to determine whether people with low household income or those in poor health were less likely to participate in wellness programs, and whether this association changed over time (see Methodology for further details.)

Between 2004 and 2008, the proportion of survey respondents participating in a wellness program increased overall from 13 percent to 25 percent. In 2004, people in the lowest income group were the most likely to participate, while those in the highest income group were the least likely (Exhibit 4). Between 2004 and 2008 participation rates doubled for middle- and higher income groups but remained relatively unchanged for the lowest income group. As a result, by 2008 middle-income groups had the highest participation rates in wellness programs, and lowest and highest income groups had the lowest rates.

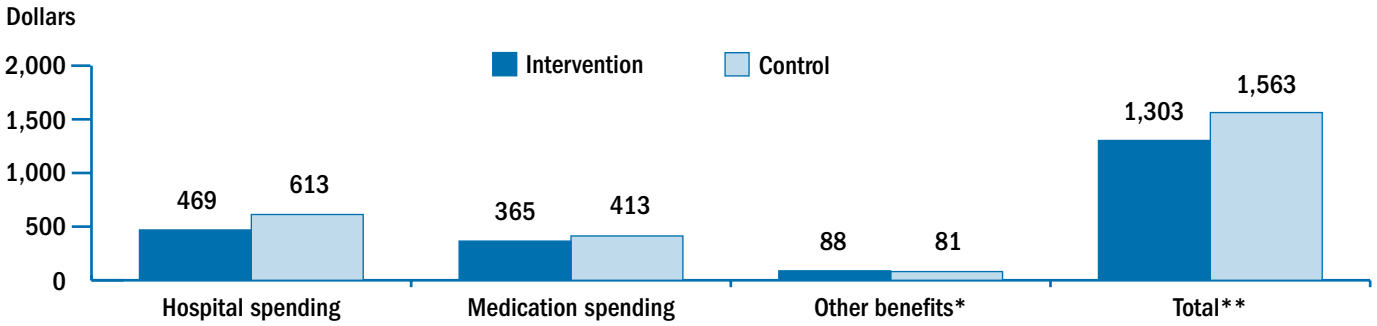
The survey asked respondents to report their general health status. In 2004, participation rates were similar across the health spectrum, from those in "bad" health to those in "very good" health, with slightly higher participation rates for respondents in "excellent" health (Exhibit 5). Between 2004 and 2008, participation rates doubled among people in "fair" to "very good" health, but remained relatively unchanged for those at the extremes of health status ("bad" or "excellent").[8] As a

Exhibit 1. Mean Health Care Costs in 2003 Among Wellness Program Participants and Control Group



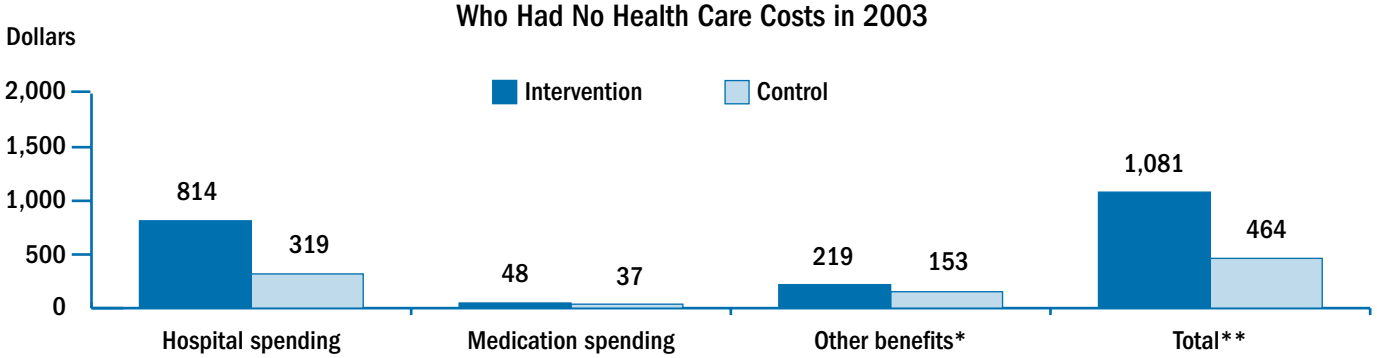
Note: Intervention n = 70,429 and Control n = 70,429.
* Other medical benefits include massage, physiotherapy, walking aides, etc.
** The amount of €177/US$251 mentioned in the text reflects the difference in the average individual increase in cost in each cohort between baseline and the end of the study. This sum therefore differs from the aggregate of the three cost categories summarized here.
Source: Authors' analysis of data from the Bertelsmann Foundation's Health Care Monitor, 2004–2008.

Exhibit 2. Mean Health Care Costs in 2006 Among Wellness Program Participants and Control Group



Note: Intervention n = 70,429 and Control n = 70,429.
* Other medical benefits include massage, physiotherapy, walking aides, etc.
** The amount of €177/US$251 mentioned in the text reflects the difference in the average individual increase in cost in each cohort between baseline and the end of the study. This sum therefore differs from the aggregate of the three cost categories summarized here.
Source: Authors' analysis of data from the Bertelsmann Foundation's Health Care Monitor, 2004–2008.

Exhibit 3. Mean Health Care Costs in 2006 Among Wellness Program Participants and Control Group Who Had No Health Care Costs in 2003



Note: Intervention n = 4,822 and Control n = 4,822.
* Other medical benefits include massage, physiotherapy, walking aides, etc.
** The amount of €177/US$251 mentioned in the text reflects the difference in the average individual increase in cost in each cohort between baseline and the end of the study. This sum therefore differs from the aggregate of the three cost categories summarized here.
Source: Authors' analysis of data from the Bertelsmann Foundation's Health Care Monitor, 2004–2008.

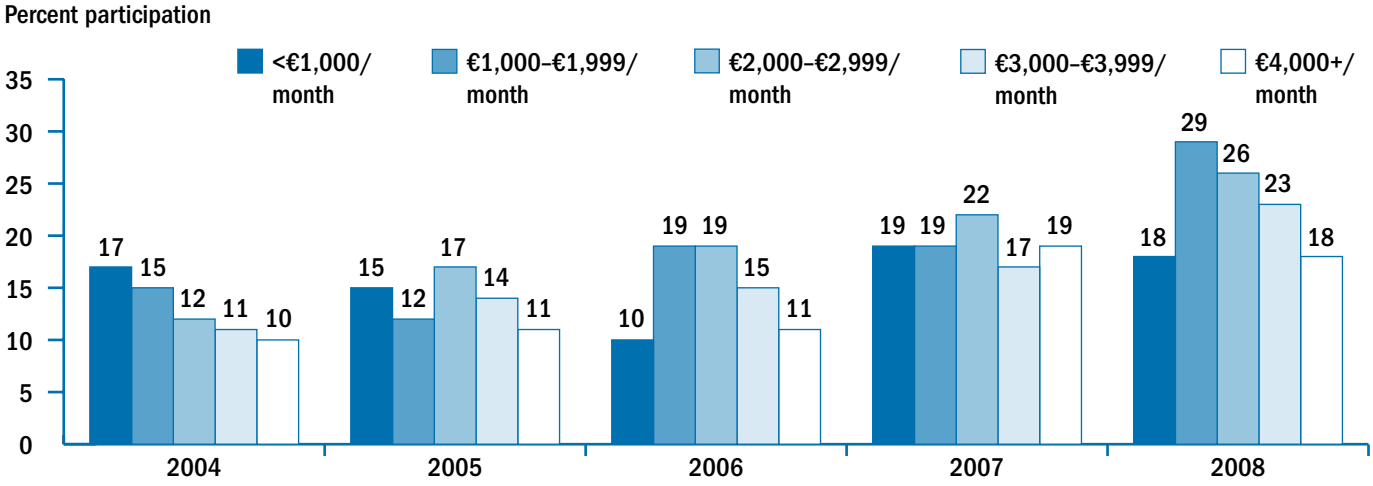
result, by 2008 people in bad health were the least likely to participate in a wellness program.

Multivariate regression models including health, age, and socioeconomic indicators found no characteristics to be significantly associated with participation in wellness programs in 2004. By 2008, however, respondents with a chronic condition were significantly less likely to participate, as were men.[9] Respondents from the lowest- and highest-income households also were less likely to participate, though the differences were not statistically significant (see Appendix).

DISCUSSION

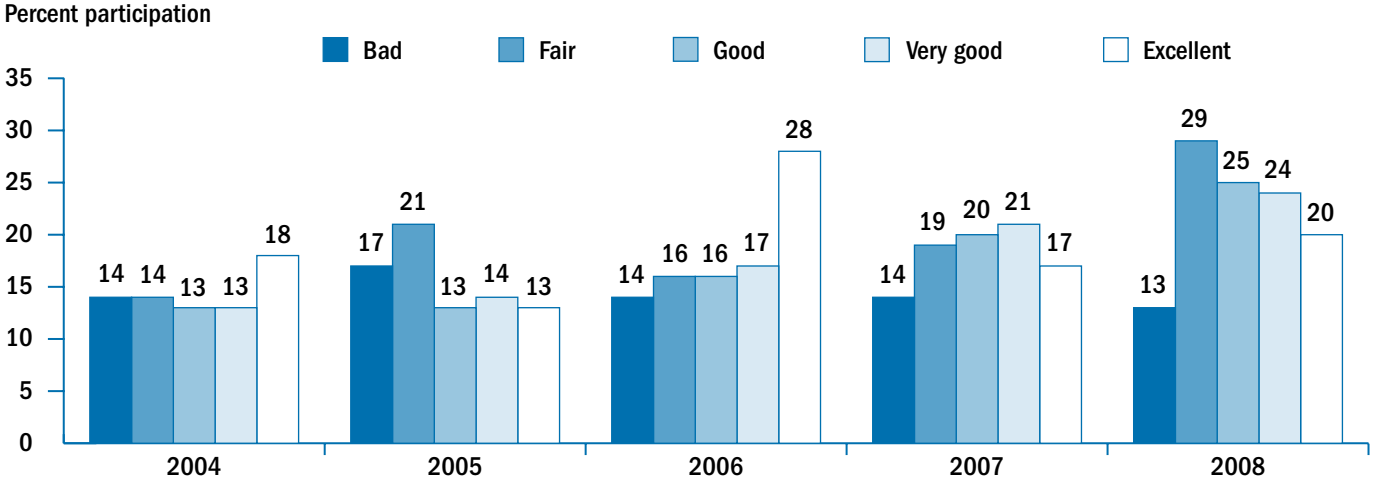
The three main goals of German wellness programs are to improve population health, reduce—or at least curb increases in—health care costs, and promote competition between different sickness funds.[10] Data from the BEK evaluation suggest that wellness programs have the potential to reduce health care expenditures by around $140 per member per year, and evaluations of other sickness funds identify similar, if somewhat higher, return-on-investment ratios.[11] Somewhat surprisingly, the BEK data also show that a subgroup of program participants

Exhibit 4. Wellness Program Participation, by Income, 2004–2008



Source: Authors' analysis of data from the Bertelsmann Foundation's Health Care Monitor, 2004–2008.

Exhibit 5. Wellness Program Participation, by Health Status, 2004–2008



Source: Authors' analysis of data from the Bertelsmann Foundation's Health Care Monitor, 2004–2008.

who had no health care costs at baseline had significantly higher costs by 2006, compared with those who did not participate and also had no health care costs at baseline. The reasons for this are not clear, though there are several possible explanations. This subgroup of program participants may have been less healthy than their matched controls. The additional physician contacts prompted by their participation in the wellness program may have led to higher health care utilization, or to detection of a disease that was adequately treated and generated modest short-term costs, which might avoid much higher costs arising from later diagnosis and treatment. The finding nevertheless challenges the assumption that wellness programs will lead to cost savings in all cases. It also shows that requiring programs to achieve cost reductions is problematic: it may be undesirable to terminate programs that lead to behavior change simply because they fail to reduce expenditures.

The analysis of survey data found that overall participation in wellness programs nearly doubled between 2004 and 2008, to one-quarter of the insured population. While participation also doubled among the subgroup of those with fair health, participation rates among those who described their health as bad stayed the same. By 2008, those with chronic conditions were significantly less likely to participate. From 2004 to 2008, uptake remained relatively unchanged among the lowest income group. The German Social Security Code explicitly requires sickness funds to help reduce socially determined disparities in health. Insofar as wellness programs prove to be effective in improving health outcomes, then the relatively low participation rates in such programs by lower-income groups and the chronically ill could have the opposite effect by exacerbating health disparities. Regrettably, the reporting requirements for sickness funds do not extend to income and health status, and it is therefore not possible for the relevant authorities to assess whether the findings suggested by the Bertelsmann data are also reflected in the evaluation data generated by the individual sickness funds. More comprehensive and systematic evaluation could help ensure that future programs are designed to give all population groups an equal opportunity to benefit.

IMPLICATIONS FOR U.S. HEALTH REFORM

In the United States, wellness programs have been broadly used since 2006. A recent survey by the National Business Group on Health found that 56 percent of large employers see wellness programs as one of the top three means of curbing health insurance costs.[12] In 2009, 36 percent of large employers offered such programs; by 2011, 54 percent offered them and 80 percent planned to do so in 2012. In 2009, 8 percent of large employers used incentives in the form of penalties, such as surcharges for smokers. In 2011, 19 percent of employers used penalties and in 2012, 38 percent planned to impose higher costs on unhealthy employees. This increase represents a doubling over one year, and nearly a fivefold increase over three years.[13]

The Affordable Care Act added momentum to the use of wellness programs by significantly expanding their potential scope. Starting in 2014, the levels of reimbursement that may be offered as incentives will increase from the previous 20 percent of the cost of coverage to 30 percent and, subject to approval from the relevant departments, may be as high as 50 percent.[14] Notably, and in contrast to the German approach, where incentives may only be paid through gain-sharing resulting from savings due to wellness program participation, programs in the United States are allowed to shift costs from those enrolled in the programs to those not enrolled. This means that health plan members who are unwilling to join wellness programs, or who join them but are unable to meet health targets, may face significantly higher health care costs. In German wellness programs, those in poorer health and/or with lower incomes may be less likely to secure a relatively modest benefit (as wellness incentive amounts rarely exceed around US$150). In U.S. wellness programs, much larger sums are at stake: the average value of incentives provided to employees was $430 in 2010.[15] Under the new provisions of the Affordable Care Act, the incentives may be much higher. For example, 30 percent of the average cost of coverage in 2011 amounts to $1,620 (Exhibit 6). Such an incentive may be used in two different ways: it may be offered as a reduction to an employee's contribution (Scenario A) or added to his or her health insurance premium

Exhibit 6. Cost-Shifting in U.S. Wellness Programs—Legally Permissible Incentives in Relation to Average Cost of Coverage, 2011

	30 percent	50 percent
If the **average cost of coverage is $5,400,** then the maximum permissible incentive is:	$1,620	$2,700
Scenario A: **Cost of coverage is reduced** for the enrolled population by the incentive amount. The final cost of coverage is:	$3,780 ($5,400 – $1,620)	$2,700 ($5,400 – $2,700)
Scenario B: **Cost of coverage is increased** for those not enrolled, and those failing to meet targets, by the incentive amount. The final cost of coverage is:	$7,020 ($5,400 + $1,620)	$8,100 ($5,400 + $2,700)

Source: Kaiser Family Foundation and Health Research and Educational Trust, *Employer Health Benefits: 2011 Annual Survey* (Menlo Park, Calif., and Chicago: Henry J. Kaiser Family Foundation and Health Research and Educational Trust, 2011).

contribution as a surcharge or penalty if the employee does not enroll in wellness programs or fails to meet incentive targets (Scenario B). The latter use of penalties has the potential to exacerbate existing inequalities in the affordability of health care—potentially making it harder for those with health problems to afford coverage. Depending on its implementation, this approach could reintroduce a form of medical underwriting under the guise of wellness incentives.[16,17] Given the strong correlation between health and income, such penalties could be particularly hard on those with low incomes, who are more likely than those with higher incomes to be unhealthy and face higher health care costs.

Both the German and the U.S. approaches to wellness incentives attempt to promote health while reducing costs.[18] It will be important to monitor their impact to ensure they do not worsen inequalities based on health status or income. However, while the reporting and evaluation requirements for the German programs are patchy, focusing on cost-savings only, and, notably, do nor require evidence on health improvement, there are no reporting requirements at all for U.S. wellness programs. Organizations such as the National Business Group on Health and the National Business Coalition on Health provide forums for members to share and develop best practices. The U.S. Department of Health and Human Services recently called for proposals to evaluate the impact of workplace health and wellness programs, and RAND is gathering the views of around 3,000 employers in response to this request.[19] Such analyses should assess whether all of those who are offered wellness incentives have a fair opportunity to benefit from them, in addition to assessing their impact on health care costs and workplace productivity. The U.S. Department of Labor is developing regulations to accompany the implementation of the amended provisions in 2014. These regulations should require employers to provide data not only on the cost savings and productivity gains from their wellness programs, but also on their impact on the health of employees across different income groups. Such policies will help to ensure that wellness programs are compatible with the spirit of the Affordable Care Act—to provide access to affordable care and improve the health of all Americans.

Notes

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2 K. G. Volpp, A. B. Troxel, M. V. Pauly et al., "A Randomized, Controlled Trial of Financial Incentives for Smoking Cessation," *New England Journal of Medicine,* Feb. 12, 2009 360(7):699–709; K. G. Volpp, L. K. John, A. B. Troxel et al., "Financial Incentive–Based Approaches for Weight Loss: A Randomized Trial," *Journal of the American Medical Association,* Dec. 10, 2008 300(22):2631–37; and C. Baicker, D. Cutler, and Z. Song, "Workplace Wellness Programs Can Generate Savings," *Health Affairs,* Feb. 2010 29(2):304–11.

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4 H. Schmidt, K. Voigt, and D. Wikler, "Carrots, Sticks, and Health Care Reform—Problems with Wellness Incentives," *New England Journal of Medicine,* Jan. 14, 2010 362(2):e3; and K. M. Madison, K. G. Volpp, and S. D. Halpern, "The Law, Policy, and Ethics of Employers' Use of Financial Incentives to Improve Health," *Journal of Law, Medicine, and Ethics,* Fall 2011 39(3):450–68.

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6 R. Busse and A. Riesberg, *Health Care Systems in Transition: Germany* (Copenhagen: World Health Organization Regional Office for Europe, on behalf of the European Observatory on Health Systems and Policies, 2004).

7 A. L. Cooper and A. N. Trivedi, "Fitness Memberships and Favorable Selection in Medicare Advantage Plans," *New England Journal of Medicine,* Jan. 12, 2012 366(2):150–57.

8 Estimates of participation rates are less reliable for people in extremes of health because of low numbers. Only 2 percent (n=30) of respondents rated their health as "'bad'" and 4 percent (n=60) as "'excellent'" in 2008. The percentage of those reporting bad health is similar to that reported in census data, however because of the overall sample size of the Gesundheitsmonitor the total frequencies for this group are low. See Statistisches Bundesamt, Wirtschaftsrechnungen—Leben in Europa (EU-SILC), Einkommen und Lebensbedingungen der Europäischen Union, Fachserie 15, Reihe 3, DeStatis Fachserie (Wiesbaden: Statistisches Bundesamt, 2011).

9 In general, there are more incentive programs specifically for women than for men, which might explain to some extent the higher participation rates by women. However, the ratio of programs on offer for women and men did not change over time, so the change in uptake by gender over time is not attributable to a change in the balance of available programs.

10 H. Schmidt, "Personal Responsibility for Health—Developments Under the German Healthcare Reform 2007," *European Journal of Health Law,* Nov. 2007 14(3):241–50.

11 W. Bödeker, H. Friedel, and M. Friedrichs, Ökonomischer Nutzen der BKK Bonusprogram. Die BKK. 2008 (4):214–218; M. Friedrichs, H. Friedel, and W. Bödeker, Teilnehmerstruktur und ökonomischer Nutzen präventiver Bonusprogramme in der betrieblichen Krankenversicherung, in: Das Gesundheitswesen, Vol. 71, Stuttgart/New York 2009, S. 623-627.

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13 National Business Group on Health and Towers Watson, *2011/2012 Staying@Work Report* (New York: Towers Watson, 2011).

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15 National Business Group on Health, "Employer Investments in Improving Employee Health: Results from the Second Annual National Business Group on Health/Fidelity Investments Benefits Consulting Survey" (Washington, D.C.: NBGH, Jan. 2011).

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17 Starting in 2014, insurance companies will no longer be able to deny coverage or vary premium rates based on adults' preexisting conditions, though there will be limited underwriting on the basis of age and tobacco use.

18 A. Oliver and L. D. Brown, "A Consideration of User Financial Incentives to Address Health Inequalities," *Journal of Health Politics, Policy and Law,* April 2012 37(2):201–26.

19 U.S. Department of Health and Human Services, "Agency Information Collection Request. 60-Day Public Comment Request," *Federal Register,* March 28, 2011 76(59):17130.

Appendix. Associations Between Personal Characteristics and Uptake of Incentives; Results of Multiple Logistic Regression Analysis for 2004 and 2008

		2004		2008	
	N (2008)*	Odds ratio	95% CI	Odds ratio	95% CI
Age	1,375	1.01	0.99–1.02	1.00	0.99–1.01
Sex: Female	752	1.21	0.81–1.82	1.66†	1.24–2.22
Chronic illness	362	1.36	0.77–2.40	0.68†	0.48–0.96
Household income (monthly)					
<€1,000	112	1	—	1	—
€1,000–€1,999	427	0.84	0.42–1.67	1.87	0.99–3.50
€2,000–€2,999	416	0.72	0.34–1.50	1.57	0.82–3.03
€3,000–€3,999	200	0.68	0.28–1.67	1.31	0.64–2.69
€4,000+	142	0.55	0.18–1.66	0.95	0.43–2.11
General health status					
Bad	30	1	—	1	—
Fair	228	1.13	0.23–5.48	4.07†	1.14–14.47
Good	725	1.02	0.22–4.88	3.42	0.96–12.15
Very good	327	1.23	0.25–6.16	3.54	0.96–13.09
Excellent	60	1.43	0.24–8.63	3.20	0.73–13.90
Body Mass Index					
<20.0	16	1	—	1	—
20.0–24.9	516	0.87	0.34–2.21	1.75	0.84–3.67
25.0–29.9	507	0.91	0.35–2.37	2.03	0.97–4.28
30.0–39.9	263	1.00	0.36–2.74	1.13	0.52–2.46
40.0+	41	**	**	1.64	0.55–4.93
Socioeconomic class					
Lower	223	1	—	1	—
Middle	758	0.91	0.56–1.47	1.43	0.95–2.14
Upper	284	0.59	0.28–1.26	1.30	0.76–2.20

Notes: CI refers to confidence interval. Model pseudo R^2: 2004 = 0.015; 2008 = 0.037.
* Respondents who also answered questions on wellness incentives (1,375 respondents answered these questions in 2008, from a total sample size of 1,533).
** Rejected from model.
† Statistically significant ($p < 0.05$).
Source: Authors' analysis of data from the Bertelsmann Foundation's Health Care Monitor, 2004–2008.

Methodology

Evaluation of a German Wellness Program

In a cohort study, 70,429 insured members of the intervention group—those who were enrolled in the wellness program—were followed over a three-year period. Members of the intervention group were matched with insured members who had never enrolled in the program. Matching criteria included sex, age, postal code, insurance status, and cost categories for health care utilization. Exclusion criteria were new enrollment or discontinuation of enrollment one year prior to the time frame of the study and during the study period. Costs were identified from routine administrative data available at the sickness fund level. All costs are total costs derived from health care utilization per insured member per year, measured in cost per insured member per year in the three categories: hospital, medication, and additional benefits. The latter benefits include treatment such as physical or occupational therapy and massage, but not outpatient physician services. Unit costs for all three resource types were derived from a national compensation system that is the same for all sickness funds and all care providers accepting sickness fund patients. The interventions analyzed incur no copayments of any kind; hence, there is no share paid by enrollees. Costs for the bonus payments and overhead costs were calculated separately. Total costs reported by the sickness fund included expenses for administration, mailing and advertisement of the program, and bonus payments. Differences in cost trends between the two groups were examined using the paired t-test with the significance level at alpha = 0.1. A subgroup analysis was performed for incentive program participants without any health care utilization in the year 2003 compared with their matched controls.

Who Uses Wellness Programs?

The Bertelsmann Foundation's Health Care Monitor is a semiannual survey that randomly samples 1,500 respondents from a nationally representative access panel. The surveys include questions on demographic and socioeconomic characteristics, in addition to a range of questions on health and health care use. Since 2004 the surveys have included questions on participation in wellness programs. For each year between 2004 and 2008, we conducted multivariate logistic regression analyses of the associations between participation in wellness programs and household income, self-rated health status, and a range of demographic characteristics. For methodological reasons, we did not weight responses. We measured the uptake of incentives by different population groups from their introduction in 2004. More specifically, we measured: 1) whether people from higher-income households were more likely to use wellness programs than those from lower-income households; 2) whether people with good health status were more likely to use wellness programs than those with poor health status; and 3) changes in the associations between use of wellness programs and income and health status over time.

About the Authors

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